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Northwestern Division

Presentation to the Brazilian Water Resources Delegation

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Agenda

- Northwestern Division Overview
- Columbia River Basin
- Missouri/Mississippi River Basin

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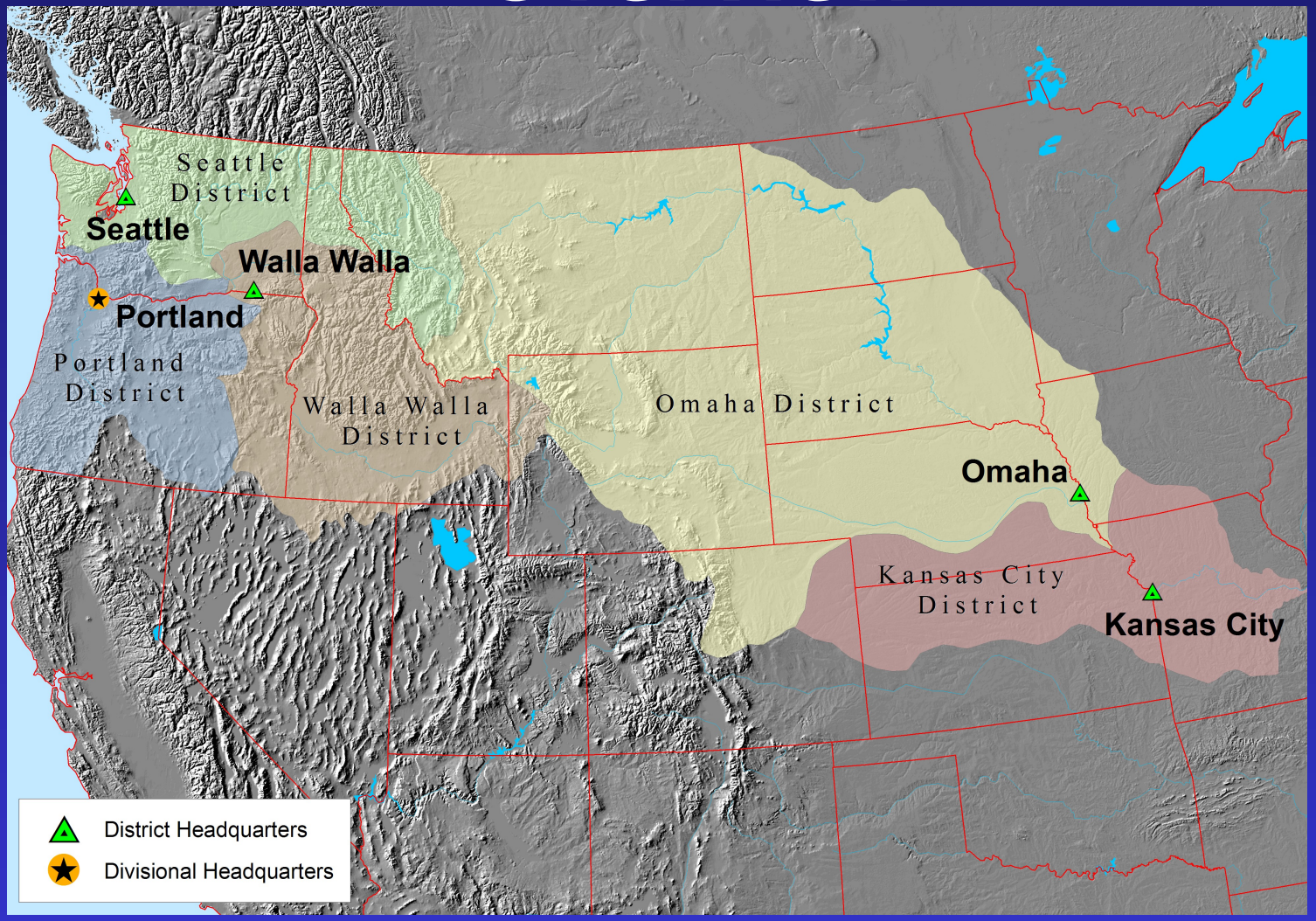
Overview



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Water Management

Columbia River Basin

2 Countries, 4 States

259,000 square miles

Missouri River Basin

10 States

539,000 square miles

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Navigation

Columbia River

- Serves 36 ports and carries 40% of U.S. wheat
- More than 485 miles of navigable water
- Transports 35 million tons of cargo each year
- Export & import traffic exceed $12 billion annually

Missouri River

- Transports 8 million tons of cargo annually
- 735-mile long Bank Stabilization and Navigation Project - Sioux City to St. Louis
- Channel maintenance supplemented by two Corps river fleets

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Hydropower

- In Columbia Basin, 21 hydroelectric dams produce 12,900 MW.
- In Missouri Basin, 8 hydroelectric dams with 2,614 MW of capacity.
- Hydro is 12.1% of US power. NWD is 17% of US hydro- $2.5 billion

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Protection of Endangered Species

- Endangered salmon in the Columbia Basin
- Endangered sturgeon, terns, and plovers in Missouri Basin.
- Stature of the Endangered Species Act

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Recreation

- Corps projects in NWD host more than 46 million visitors annually.

Flood Damage Reduction

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$3,900
TAXES '96
BECKHAND SURVIVES FALL IN WILLAMETTE
BUSINESSES SCURRY FOR VALENTINE'S DAY
ALL-STAR BRANDON REMEMBERS HIS ROOTS
ALL IN THE FAMILIES
MONDAY
February 12, 1996
35¢
The Oregonian
final
HOW THEY SAVED DOWNTOWN
The Army Corps of Engineers manipulated the water flow of 60 dams to keep the Willamette from flooding Portland
THE FLOOD OF '96

- NWD projects prevented $32 billion in cumulative damages
- Columbia Basin drains 259,000 square miles
- Missouri Basin drains 539,000 square miles
- Flood control space ranges from 25% of Columbia's seasonal volume to 200% of Missouri's seasonal volume.

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Columbia River Overview

- Limited reservoir storage capacity compared to runoff
- Managed as a system for multiple purposes, including 13 major endangered species
- International Treaty with Canada focused on sharing benefits, primarily flood control and hydropower
- Regional power coordination agreements (Pacific Northwest Coordination Agreement)
- Major issues include:
  - Future of Columbia Treaty
  - Recovery of

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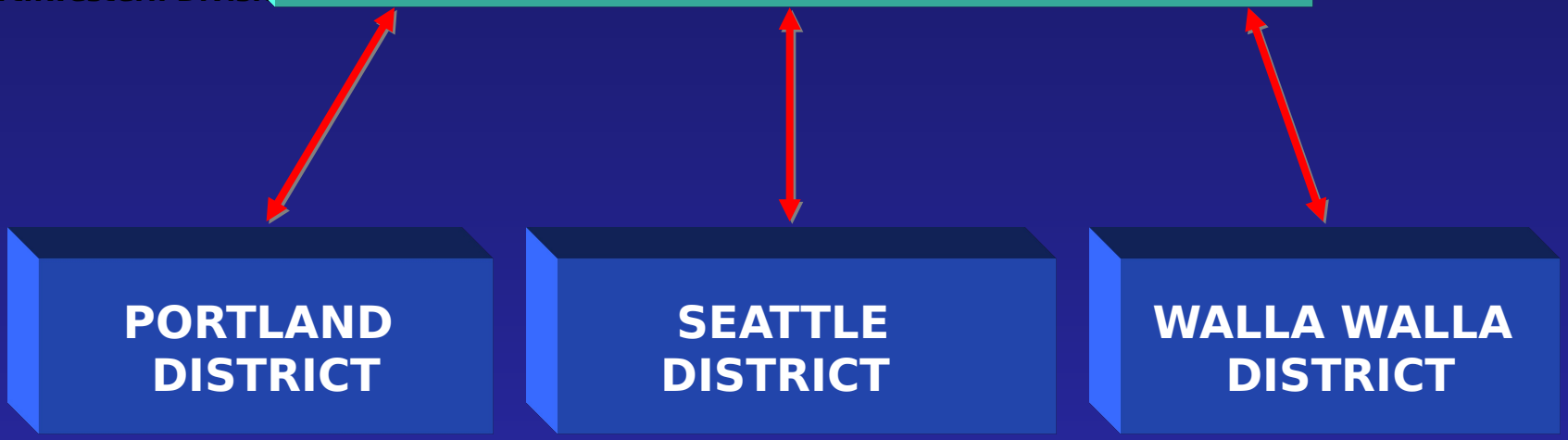
COLUMBIA BASIN WATER MANAGEMENT DIVISION



- Division focus is on system and mainstem aspects
- District focus is on tributaries and technical support
- Functions as an interdependent regional team
- Well integrated with other functions like Emergency Management for crisis response

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Mississippi/Missouri River Basin

Drains 41% of Continental U. S.
Average Flow = 640,000 cfs
Suspended Sediment Load = 180 million yd^3/yr ~ 50% of U.S. Rivers

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Missouri River Basin

- Very large reservoir storage capacity (73 MAF)
- Managed to meet multiple purposes, including three major endangered species
- Multiple stakeholders, very engaged
- Upstream and downstream interests quite different
- Major issues include:
  - Water supply and drought management
  - Recovery of endangered species
  - Navigation
  - Cultural and tribal resources
  - Climate variability

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MISSOURI BASIN WATER MANAGEMENT DIVISION

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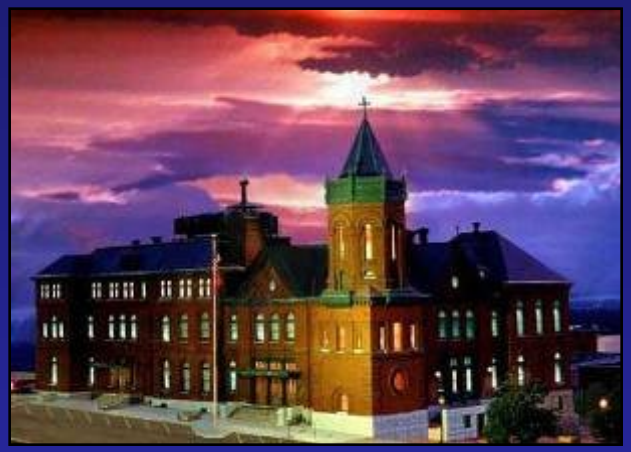
Mississippi River Commission (MRC)

- Presidential appointed commission; established 1879
- Seven Presidential appointees:
  - Three Corps Generals
  - Three Civilians
  - One NOAA Admiral
- Headquartered in Vicksburg, Miss.
- MRC work carried out by six Corps of Engineers district offices in the Mississippi valley
- Authority extends for entire river - headwaters to Head of Passes



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